5

10

ABSTRACT OF THE DISCLOSURE

An ATM cell transmitting device capable of multiplexing a plurality of time slots with a single ATM cell by using an AAL2, which includes a time slot input unit for switching a plurality of time slots; a packet processing unit for receiving the switched time slot data and forming a CPS packet; a CAM for receiving header information of the CPS packet and outputting the ATM buffer number; an ATM cell transmitting unit for storing the data of the CPS packet according to the ATM buffer number outputted from the CAM, to form ATM cells; and a controlling unit for performing a general controlling operation.